
Question 57: If vacuum tower bottom feed to the Coker unit drops below unit minimum, what are your operating options available?

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(Similar question answered by Srini in 2013 as a panelist)

Increasing amount of tight oil production with hardly any residual fraction will lead to challenges in filling up the Delayed Coking Unit (DCU). In order to maintain the DCU capacity, external purchase of HFO or VR will have to be made. If purchasing external feed is not an option and if you have multiple drums, you may have to shut a module down. The DCU could also be operated in turndown mode with or without high recycle.

FCC slurry oil, if available, could be sent to the DCU as feed. Since only a small portion of the FCC slurry / decant oil converts to coke, the remaining portion goes through the coker along with the rest of the cracked VR and mostly ends up with the HCGO. If the HCGO is sent directly to the FCC without hydrotreating, this may create a recycle stream that could become difficult to handle due to build-up of refractory type material. Hence, we typically limit this amount to approximately 10% of feed and depending on the limitations of the coking unit, you may have to cut back on vacuum residue (VR) feed rate.

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2014
